

Table A1. Regression Statistics for the Coal Pricing Model

Regression Coefficient	Variable	Parameter Estimate	Standard Error	t-Statistic
A	Overall Constant	0.211	1.864	0.113
$\beta_{1=1,1}$	DUM_REG ₁ (Northern Appalachia (NA))	-0.043	0.075	0.578
$\beta_{1=2,1}$	DUM_REG ₂ (Southern Appalachia (SA))	-0.002	0.102	0.023
$\beta_{1=3,1}$	DUM_REG ₃ (East Interior (EI))	0.038	0.098	0.390
$\beta_{1=4,1}$	DUM_REG ₄ (West Interior (WI))	0.145	0.155	0.933
$\beta_{1=5,1}$	DUM_REG ₅ (Gulf Lignite (GL))	-0.926	0.293	3.160*
$\beta_{1=6,1}$	DUM_REG ₆ (Dakota Lignite (DL))	0.127	0.280	0.453
$\beta_{1=7,1}$	DUM_REG ₇ (Powder River Basin (PG))	1.108	0.247	4.494*
$\beta_{1=8,1}$	DUM_REG ₈ (Rocky Mountain (RM))	0.041	0.126	0.326
$\beta_{1=9,1}$	DUM_REG ₉ (Arizona/New Mexico (ZN))	-0.746	0.320	2.330**
β_2	ln Q	0.117	0.045	2.607*
$\beta_{j=1,3}$	DUM_MT (Underground) * ln Q	-0.069	0.019	3.719*
β_4	ln TPH	-0.953	0.087	10.933*
$\beta_{1=1,5}$	NA*ln TPH	-0.093	0.081	1.149
$\beta_{1=2,5}$	SA*ln TPH	0.522	0.083	6.259*
$\beta_{1=3,5}$	EI*ln TPH	0.010	0.083	0.119
$\beta_{1=4,5}$	WI*ln TPH	-0.002	0.165	0.012
$\beta_{1=5,5}$	GL*ln TPH	0.445	0.159	2.799*
$\beta_{1=6,5}$	DL*ln TPH	0.076	0.118	0.646
$\beta_{1=7,5}$	PG*ln TPH	-0.217	0.114	1.903***
$\beta_{1=8,5}$	RM*ln TPH	0.292	0.076	3.826*
$\beta_{1=9,5}$	ZN*ln TPH	0.711	0.174	4.075*
$\beta_{j=1,6}$	DUM_MT (Underground) * ln TPH	0.051	0.102	0.503
$\beta_{1=1,j=1,7}$	NA * DUM_MT (Underground) * ln TPH	0.253	0.055	4.608*
$\beta_{1=1,j=2,7}$	SA * DUM_MT (Underground) * ln TPH	-0.315	0.079	4.018*
$\beta_{1=1,j=3,7}$	EI * DUM_MT (Underground) * ln TPH	0.048	0.069	0.694
$\beta_{1=1,j=8,7}$	RM * DUM_MT (Underground) * ln TPH	-0.099	0.070	1.424
β_8	ln WAGE	0.318	0.177	1.802***
β_9	ln PCAP	0.116	0.032	3.667*
β_{10}	ln PFUEL	0.007	0.024	0.308
β_{11}	Autocorrelation Parameter (Rho)	0.414	0.061	6.816*
	Adjusted R squared	0.990		
	Durbin-Watson Statistic	2.173		
	Number of Observations	225 ^a		

^aThe Cochrane-Orcutt method was used to correct for the first-order serial correlation in the data. The use of this procedure on pooled time series-cross section data using the TSP 4.4 statistical package results in the loss or dropping of the first two observations for each group of data (combination of region and mine type). As a result, the regression only uses the observations for the years 1980 through 1994 (225 observations), excluding data for 1978 and 1979 (30 observations).

*Significant at 1 percent.

**Significant at 5 percent.

***Significant at 10 percent.

Notes: The endogenous explanatory variables in the regression are *Q*, *TPH*, *WAGE*, *PCAP*, and *PFUEL*. Instruments excluded from the supply equation are the index of electric utility generation, the index of industrial production, lagged exports, coal inventories at utility plants, lagged production, lagged mine price of coal, lagged mine productivity, a time trend, the world oil price, the price of natural gas to the electric sector, the Btu content of coal, the cost of coal transportation, and a dummy variable that proxies the impact of the Clean Air Act on coal demand.

Source: Energy Information Administration, Office of Integrated Analysis and Forecasting.